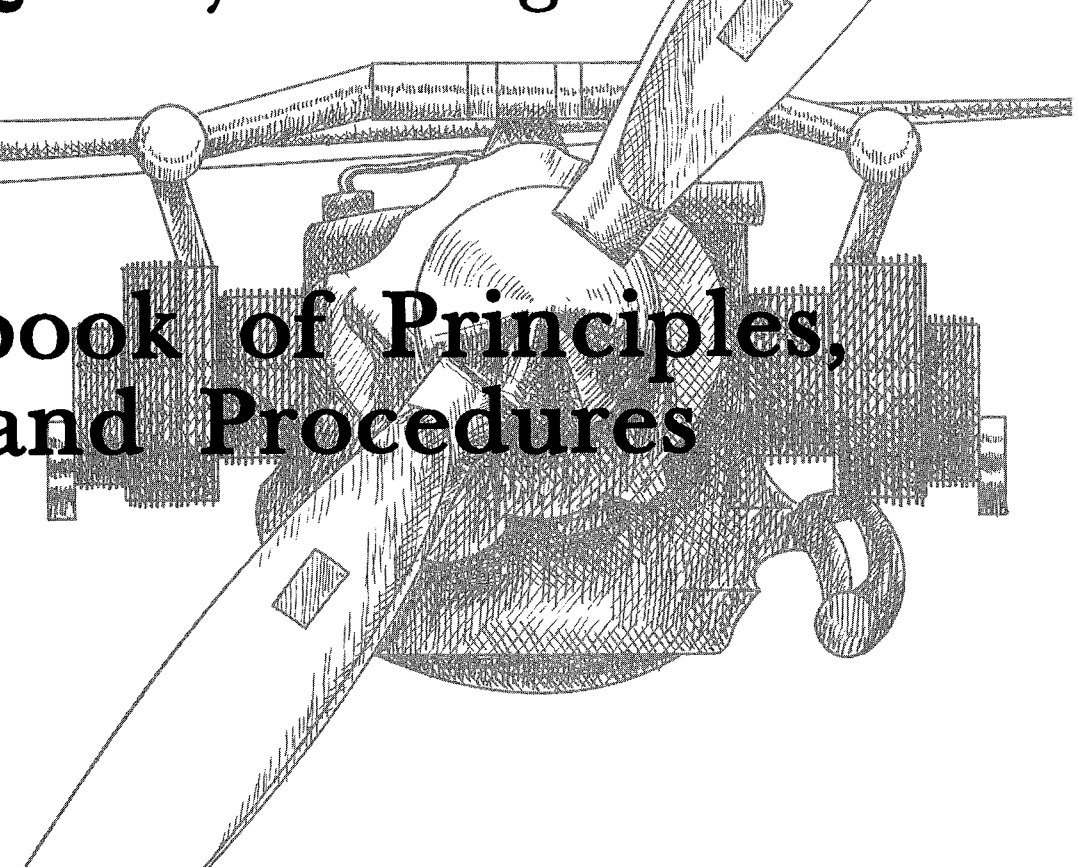


# Aircraft Certification Service

An illustration featuring two aircraft. In the foreground, a propeller-driven aircraft is shown from a low angle, appearing to be on a runway or taxiway. In the background, a jet aircraft is depicted in flight, angled upwards. The entire scene is rendered in a detailed, cross-hatched style.

Total Quality Management

Guidebook of Principles,  
Plans and Procedures

An illustration showing a detailed view of an aircraft's wing and engine assembly. The wing is positioned diagonally across the frame, with the engine mounted underneath. The illustration uses a cross-hatched technique to create depth and texture.



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## CHAPTER 5

# The Aircraft Certification Quality Award Program

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### What & Why

The Aircraft Certification Quality Award Program is an award program established by the Aircraft Certification Service Quality Improvement Council (QIC) for a three-fold objective:

- To promote continuous improvements in the quality of service,
- To promote employee pride in services provided, and
- To recognize fundamental service units within the Service that have made and held exemplary gains.

### Underlying Philosophy

This award program is built on the premise that each office has different opportunities, different problems, different clients, and different staff. A competition among the offices -- one against the other -- is not nearly as meaningful as each office carefully planning for continuous improvement within its own context, building improvement upon improvement, competing with itself alone for ever higher levels of excellence.

### Connecting Thread

Total Quality Management (TQM) principles are the common thread linking all of the Aircraft Certification management programs.

This award program calls for goals to be set in the eight quality areas that are commonly acknowledged to collectively represent the focus areas of TQM.

The Aircraft Certification Strategic Plan sets forth strategies under the three TQM principles stressed in our program:

- continuous improvement,
- customer focus, and
- employee involvement.

On the basis of the long-term strategies, we build our 5-Year Plan and formulate budget requests. The shorter term strategies provide a structure on which we build our tactical plan (a set of objectives with target dates and a definition of required resources) and fiscal programs for a given fiscal year.

Furthermore, our technical and general/managerial training programs flow from our commitment to cultivate meaningful employee participation in the decision-making and planning processes. Similarly, our Supervisory Identification and Development Program (SIDP) places a premium on applicants' abilities to develop individuals reporting to them.

And so we plan and carry out our daily responsibilities and evaluate our work processes, on TQM principles which we have chosen as our guiding principles.

**"Fundamental Service Units"**

A "fundamental service unit" (FSU) is an organizational element that is of sufficient size to be able to identify specific customers and products, yet small enough that each employee can recognize his/her individual contribution to the products of the unit.

**Determination of FSUs**

Each QIC member at the division/directorate manager level is responsible for designating the FSUs within his/her organization. A consolidated listing of the units determined by these managers to be FSUs is contained on pages 5-8 through 5-10 of this chapter.

**Who May Nominate An FSU For This Award?**

An individual FSU may nominate itself for this award.

**What Constitutes a Nomination?**

A nomination consists of two documents: (1) a "stretch plan" written at the time an FSU decides it would like to be considered for the award, and (2) a subsequent report on its progress in meeting targets defined in the stretch plan and on the status of those areas for which target gains were not assigned, if any.

## **More About Stretch Plans Please!**

A stretch plan is essentially an FSU's written statement of at least one target gain it will strive to accomplish by a defined target date in at least six of the following eight areas:

- Quality Leadership,
- Quality Measurement & Analysis,
- Quality Improvement Planning,
- Employee Involvement,
- Employee Training & Recognition,
- Quality Assurance,
- Customer Focus, and
- Results of Quality Improvement Efforts.

These areas are the same as those used in the Quality Improvement Prototype Award -- an award program administered by the Federal Quality Institute (FQI). The kinds of achievement information relevant to each area, as set forth in OPM guidance, are included in Appendix A.

## **Do All Target Gains Need To Have The Same Target Date?**

The target gains defined for each of the six to eight areas selected may have different target dates. However, no date may be later than 36 months after the date of the stretch plan.

## **Who Gets Stretch Plans?**

After an FSU has drafted its stretch plan, the plan should be given to the immediate manager of the FSU for his/her endorsement and safekeeping. For example, if the FSU happens to be a section, the stretch plan should be submitted to the branch manager.

## **Then What?**

By two weeks after all target gains have been achieved or by two weeks after the latest target date cited in the stretch plan, whichever is earlier, the FSU shall submit its report of achievements to the manager to whom it earlier entrusted its stretch plan. That manager will forward, without screening, both the stretch plan and the report to the Directorate/ Division-Level Quality Improvement Council (DLC). In the cases of both AEU-100 and AIR-300, the Deputy Director, AIR-2, shall forward the final reports of these FSUs to the Continuous Improvement Team (CIT). See details that follow on the "Continuous Improvement Team."

**How Detailed  
Must The "Report"  
Be?**

The report need not be more than a sketch of the highpoints of the FSU's achievements as they relate to the target items included in the stretch plan, and of the status of improvement areas for which no targets were established. More details on the actual achievements and status statements will be gleaned by the CIT during its site visit.

**What Does The  
DLC Do With  
These  
Documents?**

The DLC will perform a paper screen of the report to ensure that minimum award standards are met. If such standards have been met, the chairperson of the DLC will forward the plan to the chairperson of the CIT.

For either AEU-100 or AIR-300, the CIT will perform the paper screen instead of the DLC.

**"Continuous  
Improvement  
Team"**

The CIT is comprised of three or four members (including the chairperson) appointed by the QIC to perform a site visit at the location of the FSU. The purpose of the site visit is to talk personally with the FSU staff members and to gather more detail on the achievements outlined in the report. The site visit includes a feedback session to the FSU and the manager to whom the original stretch plan was submitted.

**Will The CIT  
Receive Any  
Training?**

Yes, the CIT will receive training arranged by the Planning & Program Management Division, AIR-500.

**And Then . . .**

The CIT chairperson will make a recommendation to the QIC based on the CIT's judgment of whether or not the FSU should receive an award, given both the FSU's opportunities and any built-in limitations.

**Assuming The  
QIC Approves The  
Recom-  
mendation...**

If the QIC approves a positive team recommendation, the FSU will receive the award.



### **What Is The Award?**

Each winning group will receive an award plaque. In addition, each individual in the winning group will receive a certificate and a small token of the honor he/she has earned. These items will be budgeted for and purchased by AIR-500.

Additional awards, such as monetary awards, time off, or items or services more personally meaningful to the respective individuals in the group, may also be presented at the discretion of the DLC under which the FSU operates. These items will be budgeted for and purchased by the directorate/division in which the winning group is located.

In the case of either AEU-100 or AIR-300 earning the award, the Deputy Director, AIR-2, will determine what additional awards (beyond the plaque, certificates and tokens) will be presented, and AIR-500 will budget for and purchase them.

### **What Is The Award Cycle?**

Although there is a set sequence of events associated with this program, there is no award cycle in terms of deadline dates for the events. An FSU may write a stretch plan at any time. The FSU determines when the final report is due, since it will be based on the latest target date listed in the plan. However, the latest target date may extend no further into the future than three years from the date of the stretch plan.

### **Evaluation Guidelines**

Since we are just embarking on our quality journey, we will not be expecting a complete and highly sophisticated implementation of quality concepts by individual FSUs during these first years. However, as the years go on, we will be raising our sights and expectations.

Appendix A, adapted from the OPM memo describing the Quality Improvement Prototype Award, suggests percentage ratings for various implementation levels of each of the eight quality areas (Quality Leadership, Quality Measurement and Analysis, Quality Improvement Planning, Employee Involvement, Employee Training and Recognition, Quality Assurance, Customer Focus, and Results of Quality Improvement Efforts). We would expect the winners of our award to be at least in the 40 percent level in each area for these first years.

In addition, each quality area listed in Appendix A is also given a point value (e.g., Quality Leadership is assigned 20 points) to indicate the weight of that area with respect to the other quality areas for the computation of a final score. The point values (weights) shown in Appendix A will not be used for the first few years, since those values are heavily weighted in the "Results ..." quality area, and we feel that it will take several years before substantial results will be apparent.

Weights assigned to each quality area will be determined periodically by the QIC and communicated to the workforce through the subcouncil network.

**Who Will Be  
Responsible For  
Monitoring This  
Award Program?**

AIR-500 will be responsible for monitoring the program, revising program documentation where necessary, and performing other related staff work except as specifically cited in this chapter.

## Award Paperwork Flow

### WHO

### ACTION

FUNDAMENTAL SERVICE  
UNIT (FSU)

SUBMITS STRETCH PLAN  
TO IMMEDIATE MANAGER

FSU

SUBMITS FINAL REPORT  
TO IMMEDIATE MANAGER

IMMEDIATE  
MANAGER

SUBMITS STRETCH  
PLAN & FINAL  
REPORT TO DLC

DIRECTORATE/DIVISION-  
LEVEL COUNCIL (DLC)

SCREENS TO  
ASSURE CRITERIA  
MET AT LEAST  
AT 40% LEVEL

CONTINUOUS IMPROVEMENT  
TEAM (CIT)

SITE VISIT

FEEDBACK

ACMT

FINAL  
DECISION

## **Fundamental Service Units (FSUs)**

### **FSUs (2) designated by the Aircraft Certification Management Team (ACMT):**

AEU-100	Brussels Aircraft Certification Staff
AIR-300	Systems Surveillance & Analysis Division

### **FSUs (3) designated by the Manager, Aircraft Engineering Division, AIR-100:**

AIR-107	Continued Airworthiness Staff
AIR-110	Policy & Procedures Branch
AIR-120	Technical Analysis Branch

### **FSUs (2) designated by the Manager, Aircraft Manufacturing Division, AIR-200:**

AIR-220	Production Certification Branch
AIR-230	Airworthiness Certification Branch

### **FSUs (3) designated by the Manager, Planning & Program Management Division, AIR-500:**

AIR-510	Program Planning & Analysis Branch
AIR-520	Automated Systems Branch
AIR-530	Administrative Management Branch

### **FSUs (10) designated by the Manager, Engine & Propeller Directorate, ANE-100:**

ANE-103	Technical & Administrative Support Staff
ANE-110	Engine & Propeller Standards Staff
ANE-140	Engine Certification Office
ANE-150	Boston ACO
ANE-170	New York ACO
ANE-180	Manufacturing Inspection Office
MIDO-41	Windsor Locks, CT
MIDO-44	Harrisburg, PA
MIDO-45	Teterboro, NJ
MIDO-46	East Farmingdale, NY

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## **Fundamental Service Units (FSUs) (cont'd)**

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### **FSUs (14) designated by the Manager, Small Airplane Directorate, ACE-100:**

ACE-103	Technical & Administrative Support Staff
ACE-108	Manufacturing Inspection Office
ACE-110	Standards Office
ACE-115A	Atlanta, GA ACO
ACE-115C	Chicago, IL ACO
ACE-115W	Wichita, KS ACO
ACE-115N	Anchorage, AK ACO
MIDO	Atlanta, GA
MIDO	Cleveland, OH
MIDO	Kansas City, MO
MIDO	Miami, FL
MIDO	Minneapolis, MN
MIDO	Vandalia, OH
MIDO	Wichita, KS

### **FSUs (9) designated by the Manager, Rotorcraft Directorate, ASW-100:**

ASW-103	Technical & Administrative Support Staff
ASW-110	Rotorcraft Standards Staff
ASW-150	Airplane Certification Office
ASW-170	Rotorcraft Certification Office
ASW-180	Manufacturing Inspection Office
ASW-190	Special Certification Office
MIDO-41	Bethany, OK
MIDO-42	Fort Worth, TX
MIDO-43	San Antonio, TX

### **FSUs (39) designated by the Manager, Transport Airplane Directorate, ANM-100:**

ANM-103	Technical & Administrative Support Staff
ANM-110	Transport Standards Staff
ANM-100S	Seattle ACO (the ACO as a whole as well as the following sub-elements of it):
ANM-103S	Technical & Administrative Support Staff
ANM-120S	Airframe Branch
	-- Structures & Loads Section
	-- Crashworthiness & Interiors Section
ANM-130S	Systems & Equipment Branch
	-- Avionics Electrical Systems Section
	-- Mechanical/Environmental Systems Section
ANM-140S	Propulsion Branch
	-- Propulsion Systems Section
	-- Installation/Environmental Systems Section

## **Fundamental Service Units (FSUs) (cont'd)**

ANM-160S	Flight Test Branch
	-- Aircraft Handling Qualities Section
	-- Aircraft Performance Section
ANM-190S	Aircraft Modification Branch
	-- Special Certification Section
	-- Denver Aircraft Certification Field Office
ANM-103L	Technical & Administrative Support Staff
ANM-120L	Airframe Branch
	-- Wide-Body Transport Section
	-- Narrow-Body Transport Section
	-- Small Transport Section
ANM-130L	Systems & Equipment Branch
	-- Mechanical/Environmental & Crashworthiness Section
	-- Electronic Flight Controls Section
	-- Navigation/Communications Section
ANM-140L	Propulsion Branch
	-- Continued Airworthiness/Engine Section
	-- Certification Projects Section
	-- Environmental/Technical Section
ANM-160L	Flight Test Branch
	-- Aircraft Handling Qualities Section
	-- Aircraft Performance Section
ANM-108	Manufacturing Inspection Office
ANM-108S	Seattle, WA MIDO
ANM-108L	Los Angeles, CA MIDO
ANM-108V	Van Nuys, CA MIDO

## APPENDIX A

# Description of Factors, Point Values, and Associated Scoring Guidelines

### 1. QUALITY LEADERSHIP (20 points)

#### a. Description:

The Quality Leadership factor examines how the manager of the fundamental service unit (FSU) creates and sustains a clear and visible quality value system along with a supporting structure to guide all activities of the FSU. In reporting on this factor, the following items would be appropriate:

1. Describe the role of the manager in the TQM effort. Include specific examples of visible and personal managerial involvement in the development of an effective quality culture.
2. Summarize the FSU's policy on TQM and describe how the manager's "ownership" of the policy was accomplished, and how it is reinforced.
3. Describe how the FSU establishes quality as top priority, and encourages participative management at all levels.
4. Describe how the FSU communicates its quality vision to all employees, and promotes cooperation across functional work groups to achieve quality objectives.
5. Describe how the manager has established an environment in which individual and group actions reflect a continuous improvement attitude. Give specific examples.
6. Give specific examples of expenditures for TQM efforts.

#### b. Scoring Guidelines:

0-20%

1. The Manager is beginning to support TQM activities.
2. Subordinate managers, if any, are required to exhibit good leadership skills.
3. Quality awareness is present among some work units.
4. Some resources are allocated to TQM in some areas.

20-40%

1. Subordinate managers, if any, are supportive of, and interested in, TQM.
2. Belief in continuous improvement permeates some groups within the FSU.
3. Subordinate managers and supervisors, if any, are encouraged to improve quality and to practice participative management.
4. Quality awareness is present in most areas.
5. Some resources are allocated for initiating TQM in many areas.

40-60%

1. Most of the subordinate managers and supervisors, if any, fully support TQM efforts.
2. TQM is a significant priority for many individuals/groups within the FSU; belief in continuous improvement permeates these individuals/groups; effective strategies are used to involve many individuals/groups in quality.
3. Subordinate managers and supervisors, if any, are held accountable for improving quality, for creating a participative climate, and for cooperating across functional work lines.
4. The AIR quality vision, or one specific to the FSU, is communicated and known throughout most of FSU.
5. "Ownership" of TQM effort is exercised by most individuals/groups in the FSU.
6. Adequate resources -- time, training, dollars, and staff -- are allocated.

60-80%

1. The manager participates in Quality Councils and other leadership activities.
2. TQM is the number one priority of most individuals/groups within the FSU; belief in continuous improvement permeates most of the FSU; effective strategies are used to involve subordinate managers and supervisors, if any, in quality.
3. The Manager, subordinate managers, and supervisors, if any, practice participative management and cooperate across other functional work groups to achieve quality objectives.
4. The AIR quality vision, or one specific to that FSU is communicated and



known throughout most of the FSU.

5. "Ownership" of the TQM effort is exercised at all levels of the FSU.
6. Significant resources are invested in quality improvement.

80-100%

1. The Manager is directly and actively involved in TQM activities.
2. The FSU's policy is that TQM is the number one priority and key to success; belief in continuous improvement permeates FSU; effective strategies are used to involve all subordinate managers and supervisors, if any, in quality.
3. The FSU recognizes quality as the top priority, and participative management is the predominant management style; management behavior at all levels reflects this.
4. All employees -- subordinate managers, if any, and staff -- cooperate across functional work groups to achieve quality objectives.
5. There are innovative, effective methods for communicating the quality vision throughout the FSU; the vision is part of the culture.
6. "Ownership" of TQM effort is assessed and reinforced at all levels.
7. Resource investment clearly demonstrates commitment to quality.

## **2. QUALITY MEASUREMENT AND ANALYSIS (15 points)**

### **a. Description:**

The Quality Measurement and Analysis factor examines the scope, validity, use, and management of data and information that underlie the FSU's quality improvement system. In reporting on this factor, the following items would be appropriate:

1. Describe the FSU's quality-related measures and indicate the type of information they contain relating to customers, suppliers, internal operations, products or services.
2. Describe how the FSU uses the information it collects, and specifically how it is used for continuous improvement. Give specific examples.
3. Describe how the FSU ensures that key data are accurate, timely and available to those who need them.
4. Describe the FSU's approach to selecting areas to benchmark and organizations to benchmark against, the types of data collected, and the ways that comparative data are used.

### **b. Scoring Guidelines:**

#### **0-20%**

1. The quality feedback system is in planning stages; quality information is presently collected on an ad hoc basis.
2. Plans have been made to use quality data to improve operations, end products, and services.
3. Quality data are generally not available unless specifically requested.

#### **20-40%**

1. Information on quality is collected from some internal customers.
2. Limited quality data are available on the FSU's products and services.
3. One or two examples of the use of quality data to improve operations, end products, and services are provided.
4. Quality data are not widely distributed within the FSU.
5. Areas are identified for collecting benchmark data.

#### **40-60%**

1. Information on quality is collected from most customers, many internal operations and some suppliers.

2. Quality data are available on several aspects of the FSU's products and services.
3. Some examples are provided of the use of quality data to improve operations, end products, and services.
4. Quality data are provided to subordinate managers, if any, and other key personnel within the FSU.
5. Benchmark data are collected for several processes; comparisons are made; improvements are initiated; the benchmark process itself is expanded periodically.

60-80%

1. Extensive information on quality is collected from major customers (internal and external) and suppliers.
2. Quality data are available on most aspects of the FSU's products and services.
3. Several examples are provided of the use of quality data to improve operations, end products and services.
4. Checks are made to ensure validity of quality data.
5. Quality data are generally made available to users in a timely manner.
6. Key areas are analyzed to determine benchmarking needs; comparative data are collected; comparisons are made for certain products and services and for processes in key areas; improvements are made; and periodic review is made of the benchmark process.

80-100%

1. Extensive information on quality is collected from all customers (internal and external) and suppliers.
2. Comprehensive quality data are available which measure all aspects of the FSU's products and services.
3. Routine, periodic checks are made to ensure validity of quality data.
4. Quality data are provided in a timely manner and made available to all appropriate users.
5. Entire FSU is analyzed to determine priorities for benchmarking; comparative data are collected from leaders in similar working groups; comparisons are made for priority products and services as well as internal processes; systematic improvements are made; and review of the benchmarking process is a continuing operation.

### 3. QUALITY IMPROVEMENT PLANNING (15 points)

#### a. Description:

The Planning factor examines the extent to which TQM is considered in the planning process. Particular emphasis is placed on how and when customer requirements are identified and customer satisfaction assessed, and both are used for planning purposes. In reporting on this factor, the following items would be appropriate:

1. Describe the short-term and long-term goals for TQM, and the process for establishing these goals. Describe how and to what extent employees participate in the planning process.
2. Briefly summarize specific plans for TQM, identifying key priorities for short-term and long-term improvement. Describe specifically how internal and external customer requirements and feedback are taken into account in the planning process to improve existing products and services.
3. Describe specifically how internal and external customer requirements and feedback are taken into account in the planning process to improve existing products and services.
4. Describe the principle types of data, information, and analysis used in planning (such as customer requirements, process capabilities, supplier data and benchmark data).

#### b. Scoring Guidelines:

0-20%

1. The strategic planning process is focused on general improvement goals specified by the FSU manager.
2. Customer needs are not routinely considered in the planning process.

20-40%

1. Goals for TQM are established for some programs of the FSU.
2. Improvement goals are generally specified and tracked by the FSU manager and administrative personnel.
3. A few examples are given of quality improvement planning.
4. Customer needs are generally known in key areas and are considered in the TQM planning process.

40-60%

1. Short- and long-term goals for TQM are established for key programs of the FSU.

2. For key programs of the FSU, there are established processes for developing improvement goals, assigning resources to them, and tracking progress.
3. Employees review and comment on established TQM goals.
4. A few examples are given of plans for improving quality and productivity of operations.
5. Internal and external customer needs and expectations influence the TQM planning process.
6. Internal and external customer requirements and feedback influence plans to improve products, services, and processes.
7. Some quality data, information, and analyses (including customer requirements and process capabilities) are used in planning for key programs of the FSU.

60-80%

1. Short- and long-term goals for TQM are established for most programs of the FSU.
2. Formal processes have been established in most parts of the FSU to develop improvement goals, provide resources for achieving them, and manage improvement plans.
3. Employees provide input in development of TQM goals.
4. Several examples are given of plans for improving quality and productivity of operations, and for identifying some priorities and payoffs.
5. Internal and external customer needs and expectations are significant factors in the TQM planning process.
6. Internal and external customer requirements and feedback are significant factors in plans to improve products, services, and processes.
7. Quality data and information analyses (including customer requirements, process capabilities, supplier data, and benchmark data) are used in planning in most parts of the FSU.

80-100%

1. Short- and long-term goals for TQM are established throughout the FSU as part of the overall planning process.

2. Formal processes have been established throughout the FSU to develop improvement goals, provide resources for achieving them, and manage improvement plans.
3. Employees actively participate in the development of TQM goals.
4. Many examples are given of specific plans for improving quality and productivity of operations, and for identifying key priorities and short- and long-term payoffs.
5. Internal and external customer needs and expectations are considered an essential part of the TQM planning process.
6. Internal and external customers requirements and feedback are incorporated into plans to improve existing products, services, and processes.
7. Quality data, information, and analyses (including customer requirements, process capabilities, supplier data, benchmark data) are used in planning throughout the organization.

#### **4. EMPLOYEE INVOLVEMENT (15 points)**

##### **a. Description:**

The Employee Involvement factor examines the effectiveness and thoroughness of employee involvement. In reporting on this factor, the following items would be appropriate:

1. Summarize the means available for employees to contribute to the TQM effort, especially as it involves empowerment, team, and cross-functional activity.
2. Discuss data related to current employee involvement efforts, such as percent participation in each type of involvement described above, number of teams operating during the last year, etc.
3. Describe key strategies for increasing the empowerment, involvement, effectiveness, and productivity of all types of employees.

##### **b. Scoring Guidelines:**

###### **0-20%**

1. There is a small percentage of employees participating in team activities.
2. A traditional suggestion system exists and the number of suggestions has been relatively stable over the past two or three years.
3. There are only general, non-specific plans to expand employee involvement.

###### **20-40%**

1. There are a few quality improvement, problem-solving teams.
2. The number of employees on teams increased over the past year.
3. There is an effective suggestion system in place, and suggestions and ideas from employees are on the increase.
4. There are specific plans to increase employee team participation in several areas.

###### **40-60%**

1. There is a variety of active teams (e.g., some natural work groups and some cross-functional improvement teams).
2. Less emphasis is given to individual suggestions.
3. Some employees have a feeling of empowerment; and the authority to act has been enhanced for some employees.

4. Some employees are involved in team activities and the number of teams has increased over the past two years.

5. There are plans to expand employee involvement gradually; implementation is on schedule.

60-80%

1. Many natural work groups constitute quality and productivity improvement teams, and many employees are involved.
2. Cross-functional teams work on inter-unit, system-wide improvements and voluntary teams address work environment issues.
3. Many employees have strong feelings of empowerment; authority to act has been enhanced for many employees.
4. There is a steady increase in the number of teams with a high percentage of volunteers.
5. Future plans specifically include phased-in involvement of all employees and the implementation is on schedule.

80-100%

1. Most employees are involved in various quality efforts or productivity improvement teams, including cross-functional teams; there are some self-managing teams.
2. Employee representatives (e.g., union representatives) serve as members of high-level policy, decision making groups.
3. Employees have a strong feeling of empowerment and effective approaches are used to enhance employee authority to act.
4. Innovative involvement approaches are used (e.g., gainsharing, peer performance review and self-managing teams).
5. Future plans address how to sustain momentum and enthusiasm.



## **5. EMPLOYEE TRAINING AND RECOGNITION (15 points)**

### **a. Description:**

The Training and Recognition factor examines the FSU's efforts to develop and utilize the full potential of the workforce for quality improvement, and its efforts to use rewards and incentives to recognize employees' contributions to quality improvement. In reporting on this factor, the following items would be appropriate:

1. Describe the FSU's education and training strategy and how it supports the achievement of TQM objectives.
2. Describe the types of quality training provided for the FSU Manager and subordinate managers and supervisors, if any. Provide the number of employees who received each type of training and the total number who were eligible for each.
3. Describe the types of quality training provided for non-managerial employees. Provide the number of employees who received each type of training and the total number who were eligible.
4. Describe how contributions to TQM are evaluated and recognized. Indicate whether, and how, team and peer recognition are used.
5. Give the percentage of employees who received rewards and recognition in the most recent year for which there is complete data; compare to the period prior to initiating TQM. Describe the types of rewards and recognition used during this period.

### **b. Scoring Guidelines:**

0-20%

1. The primary focus of training is on job-related skills.
2. Rewards and other kinds of recognition are primarily for individual effort; some changes planned for recognizing teamwork.
3. Rewards and other kinds of recognition are focused on general improvement; not necessarily quality- or customer-related.

20-40%

1. Some personnel in the FSU are trained in quality awareness; group problem solving is used to support continuous improvement; and ongoing training in technical skills is offered.
2. Rewards and other kinds of recognition are focused heavily on individual efforts; some teams are also recognized and/or rewarded.

3. Rewards and other kinds of recognition for quality improvement, are employed in only some sectors of the FSU.

40-60%

1. The FSU has developed an education/training strategy, and is in the process of implementing it.
2. Most of the employees in the FSU have been trained in quality awareness and group problem solving; the training emphasizes prevention of problems; technical skills of employees have been upgraded through training.
3. Individuals and teams are recognized for achievements.
4. Subordinate managers and supervisors, if any, in the majority of the FSU's sub-elements regularly and fairly recognize individuals and teams for measurable contributions.
5. Rewards and other kinds of recognition are broad-based, encompassing many sectors of the FSU organization.
6. Celebration of small successes is common in many program areas of the FSU.

60-80%

1. The FSU has implemented a training plan indicating what quality education/training is needed to support achievement of TQM objectives.
2. Nearly everyone is trained in the support of continuous improvement; the focus in the training is on the prevention of problems; technical skills of the workforce are upgraded periodically.
3. A process exists to recognize employee contributions, and there is an increased emphasis on recognition of teamwork in improving quality.
4. Subordinate managers, if any, personally, regularly, and fairly recognize both individuals and teams for measurable contributions.
5. Reward and recognition programs are broad-based and innovative, with most members of the FSU eligible and familiar with those programs.
6. Celebration of small successes is common in most parts of the FSU.
7. Peer recognition is often used.

80-100%

1. The FSU has implemented a systematic, documented plan, based on training needs analysis, for deciding what quality education/training is needed to support achievement of TQM objectives.
2. Everyone has been trained in support of continuous improvement. The focus of training is on prevention of problems, and technical skills are continuously upgraded.
3. A formal process exists to evaluate and recognize employee contributions to quality improvement.
4. Subordinate managers, if any, personally, regularly, and fairly recognize both individuals and teams for measurable contributions.
5. Reward and recognition programs are broad-based and innovative, and all members of the FSU are eligible and are familiar with them.
6. There is increased emphasis on recognition of teamwork, but a healthy balance is achieved between individual and team recognition. Celebration of small successes is common throughout the FSU.
7. Peer recognition is an important part of the reward structure.
8. There are favorable data regarding the percentages of employees and teams recognized in different employee categories, by type of recognition.

## **6. QUALITY ASSURANCE (30 points)**

### **a. Description:**

The Quality Assurance factor examines the systematic approaches used by the FSU for total quality design and control of products and services. Emphasis is on prevention rather than inspection. In reporting on this factor, the following items would be appropriate:

1. Describe how new or improved services are designed and introduced to meet or exceed customer requirements and how processes are designed to deliver these services.
2. Describe principle approaches used to ensure that key processes are adequately controlled to meet design plans and customer requirements.
3. Describe the approaches used to detect and identify problems in key processes, to design solutions, and to take corrective actions.
4. Describe how the quality of materials, components, information, and services furnished by outside suppliers is assured, assessed, and improved.

### **b. Scoring Guidelines:**

#### **0-20%**

1. A few key products/services are controlled to meet customer needs.
2. Having suppliers meet quality requirements may not be a priority of the FSU.
3. A systematic approach to quality assurance is in the planning stage; inspection remains the primary tool of quality control.

#### **20-40%**

1. Some products/services intended for outside customers and a few for internal customers are designed, reviewed, verified, and controlled to meet customer needs.
2. Some verification checks are made to ensure that quality requirements are met by the largest suppliers; however, such checks may not be systematically or consistently performed.

#### **40-60%**

1. Customer needs are considered in the establishment of product/process requirements and service quality standards.

2. Most products/services and processes intended for outside customers and many for internal customers, are designed, reviewed, verified, and controlled to meet customer needs.
3. Assessments of quality assurance systems for key products/services are performed at appropriate intervals.
4. Quality assurance systems in some parts of the FSU are updated to keep pace with changes in technology, practice, and quality improvement.
5. An established method to verify that quality requirements are met by large suppliers is used in key program areas.

60-80%

1. Customer needs constitute a significant element in the establishment of product/process requirements and service quality standards.
2. The majority of products/services and processes are designed, reviewed, verified, and controlled to meet customer needs/expectations.
3. Assessments of quality assurance are performed at appropriate levels.
4. Quality assurance systems in most parts of the FSU are updated to keep pace with changes in technology, practice, and quality improvement.
5. An established method to verify that quality requirements are met by all suppliers is used in most program areas.

80-100%

1. Customer needs are formally converted into product/process requirements and service quality standards.
2. All products/services and processes are designed, reviewed, verified, and controlled to meet customer needs/expectations.
3. Comprehensive assessments of quality assurance systems are performed at appropriate intervals; findings are translated into improvements of systems.
4. Quality assurance systems are updated to keep pace with changes in technology, practice, and quality improvement.
5. An established method to verify that quality requirements are met by all suppliers is used; quality is the key criterion used in selecting suppliers.

## **7. CUSTOMER FOCUS (40 points)**

### **a. Description:**

The Customer Focus factor examines the FSU's internal and external customer service systems, knowledge of both internal and external customers, and responsiveness and ability to meet expectations. In reporting on this factor, the following items would be appropriate:

1. Describe the methods used for obtaining customer feedback and customer expectations, and how that information is shared with employees and subordinate managers, if any.
2. Describe how the FSU analyzes customer feedback and complaints, and translates them into corrective action.
3. Describe the FSU's service goals for both internal and external customers, and how they are set and modified based on customer requirements.
4. Describe the FSU's customer interface practices, e.g., how customer-contact employees are empowered to resolve problems or how information gathered from customers is used to improved interface practices.

### **b. Scoring Guidelines:**

#### **0-20%**

1. Customer complaints constitute the primary mechanism for obtaining customer feedback.
2. Complaints are handled on case-by-case basis.
3. Customer complaints are not used systematically to improve processes.
4. Service goals focus on reducing complaints.

#### **20-40%**

1. Most external and some internal customers have been formally identified; a few feedback systems are in place to determine their needs.
2. In some program areas, there are process improvement plans to meet customer needs.
3. There are service (as opposed to product) goals for some aggregated needs (e.g., reducing waiting time, increasing responsiveness to mail requests).

40-60%

1. Systems are used to solicit feedback on a regular basis from major customers.
2. Data from customer feedback systems are sent to managers so that they may plan and carry out corrective action.
3. Service goals, based on customer feedback, exist for each major service provided to external customers.
4. Customer interface practices are used in many areas.

60-80%

1. Systematic methods are used to solicit feedback (e.g., focus groups, telephone interviews).
2. Customer feedback systems for all external and major internal customers, are used to improve processes.
3. Customer feedback data are analyzed and acted on at appropriate levels (e.g., aggregated data are used by the FSU managers and subordinate managers, if any, for strategic planning; unit data are used by individual employees or employee groups to improve systems and processes).
4. Service goals are based on expectations of major internal customers and all external customers.
5. Systematic customer interface practices are used in most program areas.

80-100%

1. There is a variety of effective, innovative methods for obtaining customer (internal and external) feedback and expectations.
2. Customer feedback is analyzed and used by all groups to improve the FSU's processes.
3. Routine feedback systems are updated as needed to reflect changing customer concerns.
4. Customer feedback data are routinely disseminated to relevant employees and subordinate managers, if any.
5. Service goals are aimed at exceeding all internal and external customer expectations.
6. Systematic customer interface practices are used throughout all FSU programs.

## 8. RESULTS OF QUALITY IMPROVEMENT EFFORTS (50 points)

### a. Description:

The Results factor examines the measurable and verifiable results of the FSU's TQM practices. Data tables and graphs summarizing trends and achievements may be utilized. In reporting on this factor, the following items would be appropriate:

1. List the two or three most significant indicators of your organization's performance (i.e., relating to your mission, of prime interest to FAA or DOT management, and reflective of customer satisfaction) over the past two or more years.
2. Summarize the results of the past two or more years indicating quantitatively the level of customer satisfaction with the quality of services.
3. Using all key measures (other than those listed in item 1 above) for assessing the quality, timeliness, and efficiency of products and services, summarize results of the past two or more years. Include in-process (e.g., percent re-work) as well as end-item measures. Include key measures of suppliers' performance as well.
4. Summarize briefly three projects that illustrate the breadth and effectiveness of the TQM activities. These projects should illustrate the techniques and methods used by the FSU to achieve continuous improvement, and should have demonstrable results.

### b. Scoring Guidelines:

#### 0-20%

1. There are some results in one or more areas.
2. There is little evidence of improvement trends.
3. Results achieved are in one or more dimensions -- quality, timeliness, efficiency -- in one or more areas.

#### 20-40%

1. Some significant indicators of performance demonstrate improving results, including customer satisfaction.
2. Improvements have been achieved in one or more dimensions -- quality, timeliness, efficiency -- across several areas.
3. The quality of some suppliers is improving.



40-60%

1. Some significant indicators of performance demonstrate good results.
2. Customer satisfaction with quality of products/services is good and reflects general improvement over the past two years.
3. The results are related to the performance of the FSU's mission.
4. Improvements have been achieved in several dimensions -- quality, timeliness, efficiency -- across many areas.
5. The quality of the suppliers is generally improving.

60-80%

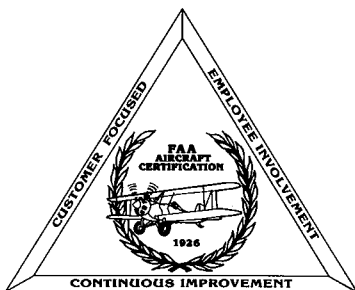
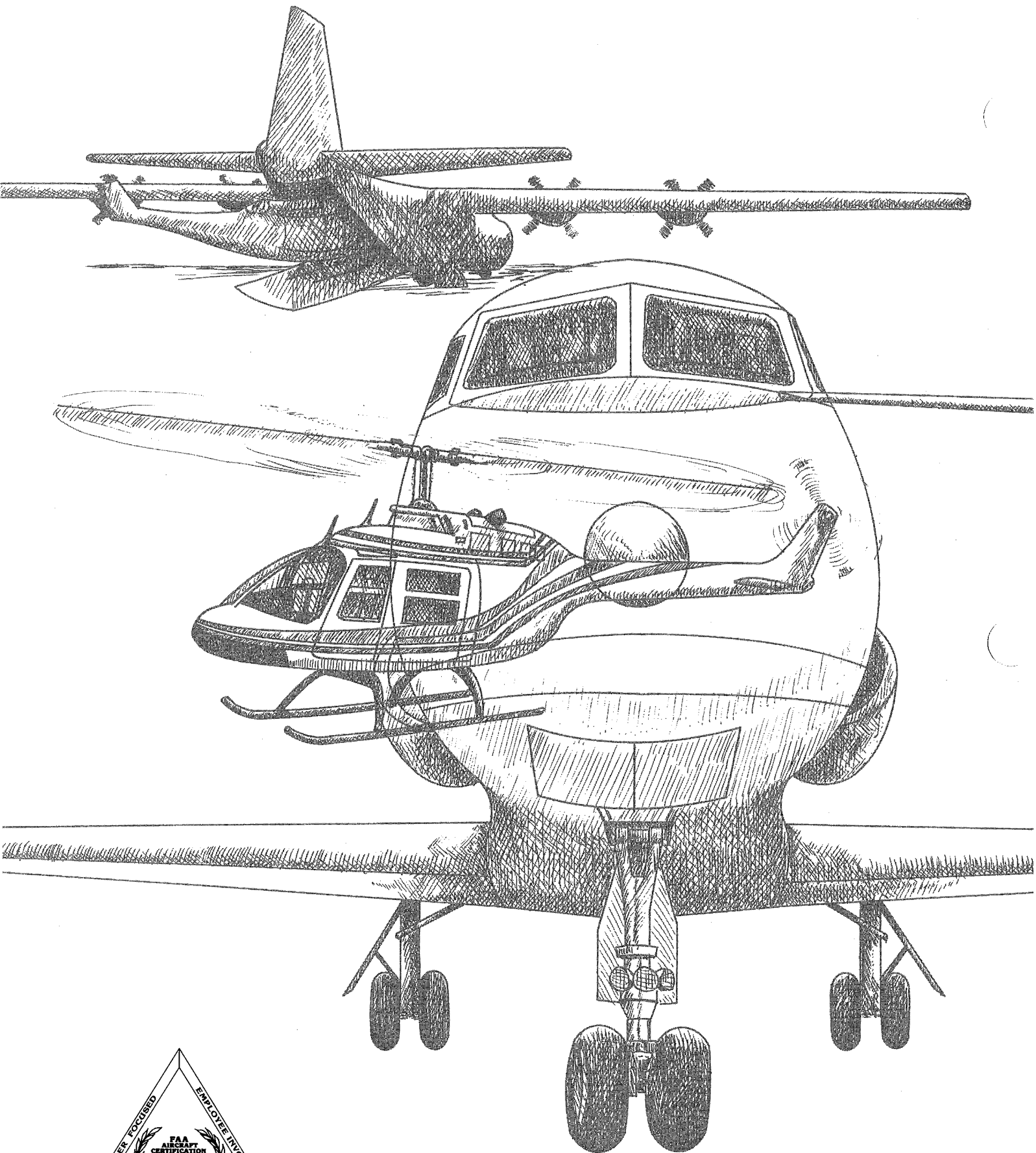
1. Most significant indicators of performance demonstrate excellent results, at least as good as others in all areas.
2. Customer satisfaction with quality of products/services is very good and reflects improvement over the past two years.
3. The results contribute to the performance of the FSU's mission.
4. Good results have been achieved in almost all dimensions -- quality, timeliness, efficiency -- across most areas.
5. The positive results are related to a TQM approach.
6. The quality performance of most suppliers has been improving over the past two years.

80-100%

1. Most significant indicators of performance demonstrate exceptional results, superior to others in all areas.
2. Customer satisfaction with the quality of products/services is at a high level, and shows improvement in each year over the past two or more years.
3. The results contribute significantly to the performance of the FSU's mission.
4. Excellent results have been achieved in all dimensions -- quality, timeliness, efficiency -- across all areas.
5. Results are clearly and strongly related to a TQM approach.
6. Quality performance of all suppliers has been uniformly improving over the past two or more years.







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